

# Breaking down the wall: Chemical biology tools to study the microbial cell wall and the search for new antibiotics

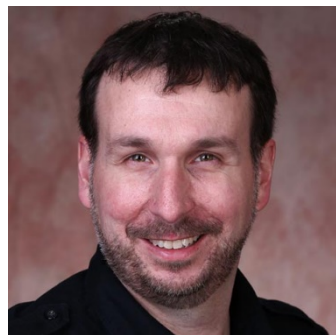
## Seminar

Monday,  
February 26, 2024

3:00 – 4:00 p.m.

Beaupre Center,  
Room 105

Antimicrobial resistance is one of the top global public health threats and is estimated to be directly responsible for 1.3 million global deaths per year with a projected healthcare cost of up to \$1 trillion USD by 2050. The cell walls of fungi and bacteria have provided a treasure trove of clinically relevant antimicrobial targets. While our understanding of the biosynthesis of cell wall polysaccharides is well established, our knowledge of the degradative and remodeling processes and their coordination with biosynthesis lags behind. To address this gap in understanding we have developed several glycoconjugates and peptidomimetics that target carbohydrate acting enzymes in bacteria and fungi. This talk will discuss two ongoing projects in our lab, the characterization of  $\beta$ -(1,3)-glucan transglycosylases from *Candida parapsilosis* as a potential antifungal target, and the use of diamides and glycosyl triazole inhibitors to investigate the role N-acetylglucosaminidases play in the metabolism of Gram-positive bacteria.



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